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combinational logic configured to combine pairs of said index values to form

data storage configured as a hash table referencing indexed data corresponding to said combined hash indices.

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

3. The data dictionary according to claim 1 wherein said inverse fault-tolerant decoder implements a reverse perfect error correction code.

4. The data dictionary according to claim 3 wherein said reverse perfect error correction code comprises a reverse Golay code.

5. The data dictionary according to claim 1 wherein said inverse fault tolerant decoder is further configured to identify said data vector as one of (i) a border vector type located at a border of a decoding sphere and (ii) a non-border vector type located interior to said decoding sphere.

6. The data dictionary according to claim 1 wherein said inverse fault-tolerant decoder is configured to:

identify said data vector as a border vector type,

define an offset of said data vector from a center of a decoding sphere of an error-

correction code implemented by said inverse fault-tolerant decoder; and

identify all possible offsets from adjacent decoding spheres of said error-correction code until said combinations fill in all bit positions corresponding to said data vector such that centers of said adjacent decoding spheres correspond to said index values.

7. The data dictionary according to claim 1 wherein said fault-tolerant decoder implements a reverse Golay code and is configured to:

identify said data vector as a non-border vector type;

identify an offset vector of said data vector from a center of a central index decoding sphere representing a specified offset distance;

identify centers of adjacent decoding spheres within said specified offset distance of said data vector; and

combines said centers of said adjacent decoding spheres with said center of said central index decoding sphere to form pairs of indexes.

8. A method of accessing a dictionary comprising the steps of:

transforming a data vector into a plurality of predetermined index values;

combining pairs of said index values to form corresponding combined hash indices;

and

referencing indexed data stored in a hash table corresponding to said combined hash indices.

9. The method according to claim 8 wherein said data vector comprises a bit-attribute vector.

10. The method according to claim 8 wherein said transforming step implements a reverse perfect error correction code.

11. The method according to claim 10 wherein said reverse perfect error correction code comprises a reverse Golay code.

12. The method according to claim 8 wherein said transforming step further includes a step of identifying said data vector as one of (i) a border vector type located at a border of a decoding sphere and (ii) a non-border vector type located interior to said decoding sphere.

13. The method according to claim 8 wherein said transforming step further comprises the steps of:

identifying said data vector as a border vector type,

defining an offset of said data vector from a center of a decoding sphere of an error-correction code implemented by said inverse fault-tolerant decoder; and

identifying all possible offsets from adjacent decoding spheres of said error-correction code until said combinations fill in all bit positions corresponding to said data vector such that centers of said adjacent decoding spheres correspond to said index values.

14. The data dictionary according to claim 8 wherein said transforming step further comprises the steps of:

identifying said data vector as a non-border vector type;

identifying an offset vector of said data vector from a center of a central index

decoding sphere representing a specified offset distance;

identifying centers of adjacent decoding spheres within said specified offset distance

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combining said centers of said adjacent decoding spheres with said center of said central index decoding sphere to form pairs of indexes.

inverse fault-tolerant decoder logic configured to transform a data vector into a plurality of predetermined index values;

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17. The data dictionary according to claim 15 wherein said inverse fault-tolerant decoder implements a reverse Golay code.

18. The data dictionary according to claim 15 wherein said inverse fault tolerant decoder logic is further configured to identify said data vector as one of (i) a border vector type located at a border of a decoding sphere and (ii) a non-border vector type located interior to said decoding sphere.

identify said data vector as a border vector type,

define an offset of said data vector from a center of a decoding sphere of an error-correction code implemented by said inverse fault-tolerant decoder; and

identify all possible offsets from adjacent decoding spheres of said error-correction code until said combinations fill in all bit positions corresponding to said data vector such  
5 that centers of said adjacent decoding spheres correspond to said index values.

20. The data dictionary according to claim 15 wherein said fault-tolerant decoder logic implements a reverse Golay code and is configured to:

identify said data vector as a non-border vector type;

identify an offset vector of said data vector from a center of a central index decoding  
5 sphere representing a specified offset distance;

identify centers of adjacent decoding spheres within said specified offset distance of said data vector; and

combines said centers of said adjacent decoding spheres with said center of said central index decoding sphere to form pairs of indexes.

TECHNICAL FIELD

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